



**STRATEGY
RESEARCH
PROJECT**

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

**EMERGING NON-TRADITIONAL SECURITY ISSUES FOR
THE NEW MILLENNIUM**

BY

**LIEUTENANT COLONEL ADDISON D. DAVIS IV
Senior Service College Fellow, U.S. Army
STANFORD UNIVERSITY**

**DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution is Unlimited**

USAWC CLASS OF 1999

U.S. ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013-5050



DTIC QUALITY INSPECTED 4

19990907 075

USAWC STRATEGY RESEARCH PROJECT

Emerging Non-Traditional Security Issues for the New Millenium

Prepared by

**LTC(P) Addison D. Davis, IV
United States Army**

**US Army War College
Senior Service College Fellow
1999**

**Hoover Institution on War, Revolution, and Peace
STANFORD UNIVERSITY**

The views expressed in this academic research paper are those of the author and do not necessarily reflect the official policy or position of the Department of the Army, the Department of Defense, or the U.S. Government.

ABSTRACT

AUTHOR: LTC(P) Addison D. Davis, IV
TITLE: Emerging Non-Traditional Security Issues for the New Millenium
FORMAT: Strategy Research Project
DATE: 12 May 1999 **PAGES:** 31 **CLASSIFICATION:** Unclassified

The United States enters the new millenium faced with a host of ongoing and potential security challenges. The rapid pace of “globalization”, coupled with the increasing interdependence among nations, will cause the relative decline of America’s unprecedented power over time. On the periphery of the more visible threats to national security are a series of international conventions, protocols, treaties, and agreements that will directly or indirectly affect military activities. Collectively, the US Army is referring to these phenomena as Emerging Non-Traditional Security Issues (ENSI). Selected ENSI will be discussed to determine their potential affect on military activities, they include the following: the Convention on the Rights of a Child which could regulate the minimum recruitment age, the Kyoto Protocol on Climate Change which could regulate military fuel consumption, and the Basel Convention on the Transboundary Movement and Disposal of Hazardous Waste which could affect the sustainment of forward deployed forces.

TABLE OF CONTENTS

ABSTRACT.....	iii
TABLE OF CONTENTS.....	v
LIST OF ILLUSTRATIONS.....	vii
EMERGING NON-TRADITIONAL SECURITY ISSUES FOR THE NEW MILLENNIUM.....	1
PREPARATION FOR COMBAT.....	4
MANNING THE FORCE.....	6
EQUIPPING THE FORCE.....	11
TRAINING THE FORCE.....	14
SUSTAINMENT OF FORWARD DEPLOYED FORCES.....	19
THE WAY AHEAD.....	23
ENDNOTES.....	25
BIBLIOGRAPHY.....	29

LIST OF ILLUSTRATIONS

Figure 1.....	8
---------------	---

EMERGING NON-TRADITIONAL SECURITY ISSUES FOR THE NEW MILLENNIUM

As the United States continues its triumphant march into the next millennium, it will be confronted every step of the way by significant challenges to its national security both at home and abroad. Although America currently reigns supreme as the only global superpower, the ever-changing geopolitical environment is bound to cause her unprecedented power to diminish over time.¹ Further, the rapid pace of "globalization", increasing interdependence among nations, asymmetrical threats posed by weapons of mass destruction, terrorism, cyberwarfare, and a myriad of transnational dilemmas, will significantly hamper America's quest for greater security and economic prosperity. Key to overcoming these challenges and abating the diminution of relative power will be the ability of the United States to shape the international agenda in ways which preserve US interests while attempting to ensure a more secure world.²

Although the US is once again engaged in armed conflict on the continent of Europe, the American armed forces must continue to assess the full range of other potential threats to national security and seek to identify a tentative array of viable military responses. Hans J. Morganthau succinctly reinforces this requirement when he remarked, "All history shows that nations active in international politics are continuously preparing for, actively involved in, or recovering from organized violence in the form of war."³ However, more contemporary political scientists tend to purport a more diminished role for military forces in international politics. Over time, the "realist" assumptions of Morganthau and others have given way to those that underlie the concept

of complex interdependence. A world in which states are no longer coherent units or the dominant actors. A world in which military force is predominately no longer a usable and effective instrument of power. And finally, a world no longer driven by the rigid hierarchy of politics that depict a scenario where issues of military security dominate economic, social, and environmental interests.⁴ In sum, a world much like the world today.

The assumptions which underlie the conditions of complex interdependence are further reinforced through the successful application of "soft power" by lesser states and non-state actors. Soft power is a term used by American scholar Joseph Nye to categorize the power to co-opt, rather than to coerce, others to your agenda and goals.⁵ The growing influence of soft power can be observed daily in the efforts of non-governmental organizations (NGOs) and a multitude of special interest groups to exert their will on the international agenda. Consequently, the application of "soft power" has unquestionably diminished the influence of the United States among her allies and in the broader international forum of the United Nations.

Assuming that an era of complex interdependence and the potential implications of soft power diminish the role of military forces in international politics, it follows that the armed forces will be relegated to a lower priority than economic, social, and environmental concerns. Yet, although relegated to a lower priority, the stakes involving the possible use of military force remain high and the mere thought of US military failure in the international arena could prove more damaging than all of the economic, social, and environmental concerns combined. Consequently, in a world characterized by complex interdependence and soft power the US armed forces must recognize the

challenges of a diminished role, steadfastly embrace the "realism" of Morgenthau and never lose sight of their primary mission, "...to win our nations wars."⁶

Consistent with the need for constant vigilance is the equally daunting task of transforming the existing framework for our national military strategy to ensure it retains the ability to effectively shape the international environment and responds to the full spectrum of potential threats. Currently, the armed forces seek to shape the international security environment via overseas presence and peacetime engagement activities.⁷ The sustainment of forward deployed forces operating from overseas bases enables the preservation of alliance commitments and sends a viable signal to those whom might question US resolve. However, as a result of significant changes in American military strategy since the collapse of the Soviet Union and the end of the Cold War, the US military has downsized and restructured by transitioning the bulk of its strength from forward-deployed locations abroad to a power projection force, essentially stationed within the continental US. Since 1991 the active component of the Army alone has reduced its strength from of over 785,000 soldiers down to a structure which contains less than 485,000 soldiers today. Regardless of the relative location of US forces, the world has become more interdependent and consequently the potential scenarios for employment of US military forces have increased. A third of the force is now gone, yet overseas missions have expanded ten fold. The challenges posed by a potentially volatile international environment, coupled with the increasing demands on a smaller military force, mandate that every effort must be made to preserve the strength of the US military.

Somewhere out there on the periphery of all the more visible threats and challenges to US national security are a series of international agreements and domestic

policy initiatives which potentially will have a direct or indirect affect on the warfighting mission of the US armed forces. Currently, members of the defense community are referring to these phenomena collectively as “Emerging Non-Traditional Security Issues” or ENSI.⁸ In general terms, ENSI come in the form of international protocols, treaties, and conventions, and domestically in the form of laws, statutes, and Executive Orders. Some relate to international environmental issues such as the Basel Convention on the Transboundary Movement and Disposal of Hazardous Waste, the Kyoto Protocol on Global Climate Change, and a European Union ban on the production and use of ozone depleting substances. Others include the Ottawa Protocol banning the manufacture, export and emplacement of anti-personnel land mines; the Convention on the Rights of the Child which seeks to regulate the age at which individuals can begin to perform military service; and the Rome Statute which would establish an International Criminal Court to try those individuals suspected of war crimes, genocide and crimes against humanity. Finally, there are a plethora of domestic issues that the US military has had to endure for more than three decades. They include restrictions on maneuver lands to protect animal habitats, reforestation programs, wetlands preservation projects, noise abatement ordinances, and hazardous waste disposal procedures.

An ever increasing influence on the ability of the United States to shape the outcome of world events is the extent to which selected international agreements and corresponding domestic policy decisions affect the use of various elements of power; diplomatic, economic, social, and military. This paper will focus on the affects absorbed by one element of power—military power. More specifically, it will seek to analyze the potential impact of selected international agreements on the ability of the US armed

forces to prepare forces for combat and sustain forward deployed forces dispatched around the world in support of the US national security strategy.⁹

PREPARATION FOR COMBAT

The principal peacetime activity of the US military is the constant and relentless preparation for war. This is done not necessarily to “promote war” or glorify combat against a foe, but to preserve the trust that in the event the “call to arms” is ever sounded [and at some point in time it will be], the expectations of a nation will be fulfilled. The great nineteenth-century military theorist Carl von Clausewitz provides a useful summary of the preparation process, “The whole of military activity must therefore relate directly or indirectly to the engagement. The end for which a soldier is recruited, clothed, armed, and trained, the whole object of his sleeping, eating, drinking, and marching is simply that he should fight at the right place at the right time.”¹⁰ During this period of relative instability in the international arena, the military’s ability to focus “directly or indirectly on the engagement [war]” is constrained by its own internal bureaucratic debates and by numerous externalities, to include the potential effects of selected international agreements. If enacted, two proposed international agreements in particular, the Convention on the Rights of the Child (CRC) and the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC), will affect the ability of the US armed forces to prepare for combat.

Before discussing the potential effects of the CRC and Kyoto Protocol, it is first necessary to outline a set of criteria to enable further analysis. Three essential elements of preparing a military force for combat include the following: manning the force,

equipping the force, and training the force. Manning the force is a detailed process which involves determining the number of people needed for military duty based on force planning requirements, the recruitment and retention of military personnel, and their initial testing and training for employment in an associated Military Occupational Specialty (MOS). Equipping the force is a lengthy process driven by force planning requirements to determine the material needs of each military service, research and development of new equipment, acquisition and production of new equipment, and finally placing the equipment in the hands of the troops in the field. Training the force in many respects is a culminating process in which manning and equipping come together to enable units the opportunity to hone proficiency in the critical individual and collective tasks needed for success in combat.

MANNING THE FORCE

Since the inception of the All-Voluntary Force in America following the Vietnam War, the US armed forces have consistently been able to attract the requisite number of qualified recruits. However, as a result of a booming US economy and a steady decline in the number of young Americans considering military service a viable career option, the US armed forces are struggling to meet the minimum recruitment goals necessary to adequately man the force.¹¹ All indications are that this struggle will continue. For the moment, current projections indicate continued growth in the economy and no foreseeable change in the attitudes of many young Americans toward military service. If implemented, a proposed optional protocol to the Convention on the Rights of A Child

might further exacerbate the shortage of new recruits entering the military force each year.¹²

The Convention on the Rights of a Child is a United Nations protocol enacted in 1990 which highlights the importance of providing proper care and consideration to the lives of children below the age of eighteen. Further, it mandates that states will refrain from either recruiting children who have not attained the age of fifteen nor allowing them to "take a direct part in hostilities"¹³ Although the US has not ratified the Convention on the Rights of a Child, current US laws preclude either the recruitment or military service of children under the age of seventeen. However, the proposed optional protocol currently under deliberation would raise the minimum age of recruitment and military service from fifteen to eighteen years of age.¹⁴ The need to increase the age from fifteen to eighteen was precipitated by the fact that external observers during present day conflicts find it difficult to distinguish whether a youth is fifteen years of age or less. At eighteen, the "child" or young adult has reached puberty and a more accurate distinction in age can be made.¹⁵ At any rate, a change in the age from seventeen to eighteen would have a significant impact on current US military recruiting practices.

The primary market for military recruiting in the US is rising high school seniors, most of who receive information on military job opportunities via high school assemblies, job fairs, and national advertising campaigns.¹⁶ Although the majority of US military personnel reach the age of eighteen before assignment to a unit or ship potentially destined for combat, the ability to recruit potential candidates in high school and enlist selected high school graduates as early as age seventeen is critical. During Fiscal Year 1998, the US Army enlisted 4,646 seventeen year old recruits (6.2% of the

total enlistment for that year). Further, the data in Figure 1 indicates a steady increase in the number of seventeen year olds enlisted over the last five years.

United States Army, Age 17 Accessions, Fiscal Years 1990-1998

1998	4,646	6.2% of Total Accession Mission
1997	3,863	4.7% of Total Accession Mission
1996	3,102	4.4% of total Accession Mission
1995	2,767	4.4% of total Accession Mission
1994	2,637	3.9% of Total Accession Mission
1993	3,238	4.2% of Total Accession Mission
1992	3,691	4.9% of Total Accession Mission
1991	4,332	4.9% of Total Accession Mission
1990	5,467	5.0% of Total Accession Mission

Figure 1¹⁷

As a result of the previously discussed challenges to recruiting, the US Army fell a total of 797 soldiers short of their recruiting goal for Fiscal Year 1998.¹⁸ The combination of these two circumstances could create a consolidated shortfall of well over 5,400 recruits in the active component of the Army alone. With a projected projected shortfall of over 5,000 Army recruits for Fiscal Year 1999, the magnitude of the recruiting problem is even greater.

Changes in current procedures have even greater implications elsewhere because they also have a tremendous affect on the Army Reserve and National Guard components of the armed forces. During Fiscal Year 1997, the US Army Reserve enlisted 2,004

soldiers who were seventeen years of age (10.8 % of all enlistments for that year). The Army National Guard also orients the majority of their recruiting effort at the seventeen-year-old audience as well. This focus allows them to encourage service in the National Guard while the rising seniors are simultaneously considering plans for college and future employment opportunities. Finally, the Junior Reserve Officer Training (JROTC) Program, which provides citizenship awareness courses and military instruction in over 1,370 high schools across the country, might also be at risk.* Consequently, current and projected trends in military enlistment programs, coupled with the optional protocol limitations on military recruiting and service, could have a tremendous impact on the US armed forces' ability to man the force in the new millenium.

Facing an already serious dilemma in recruiting, the US armed forces must consider a range of options to offset a shrinkage of the candidate pool for enlistment. One obvious choice is to do nothing. The US has not ratified the 1990 Convention on the Rights of the Child, therefore from a "realist" point of view it is highly unlikely that the US would embrace the optional protocol that places even greater restrictions on age limitations for recruiting and military service. However, given the more plausible conditions of complex interdependence, coupled with the growing importance of soft power in the international arena, the probability of eventual US acquiescence is a possibility. Especially given the recent success of the "Ottawa Process" in banding together a coalition of non-governmental organizations (NGOs), humanitarian groups, and medium and small powers to broker an agreement to eliminate the production, emplacement, and export of anti-personnel landmines.¹⁹ Yet, much like the US

* 270 additional high schools are currently on a waiting list to initiate the JROTC program as part of their curriculum.

reluctance to ratify the Convention on the Rights of a Child, the US was not one of the 122 nations who signed on to the Ottawa agreement to ban anti-personnel landmines.

Assuming that support blossoms for the optional protocol, the US armed forces must develop a response that will mitigate the effects on an already struggling enlistment program. One current proposal is to restrict the enlistment of qualified applicants to eighteen years of age or older, except in the case of an individual whom has reached their seventeenth birthday and obtained the appropriate parental consent. Further, the proposal would seek to de-link the age of consent to service with any restrictions on the age at which individuals might receive recruiting information.²⁰ In the end, such a proposal would accomplish the overarching goal of the Convention on the Rights of the Child, which is to protect those children age fifteen and younger from the horrors of combat.

In the event passage of the optional protocol became a reality and the minimum age of enlistment became eighteen years of age, the military would need to adjust their recruiting strategy even further given the dual realities of a booming economy and the limitations imposed via international legal measures. Greater incentives might be required to heighten the desire of young Americans to join the military. Such incentives might include larger cash bonuses for college or lump sum payments and a shorter-term enlistment, such as 18 months. The increased availability of federal student loans has offset past enhancements to military service from college bonuses. Consequently, the student loan benefits themselves might not be enough incentive to join the military. However, such incentives, coupled with a guaranteed salary and a reduced enlistment period (from two years to 18 months), might cause a larger number of college bound

students to spend only a year and a half in the Army while earning money to off set the ever-increasing costs of a college education.

EQUIPPING THE FORCE

During this era of accelerated technological change, the US military has been forced to strike a fine balance between the development and production of advanced weapon systems and the ever-increasing cost of putting a new piece of equipment into the field.²¹ Concurrently, the development process is challenged even further by a host of environmental initiatives which *de facto* regulate the design of equipment by dictating equipment emissions levels and banning the use of selected substances in equipment components. Additionally, manufacturing processes which involve the vast majority of hazardous materials used by the Department of Defense consistently require procedural reviews to ensure compliance with federal, state, and local environmental laws.²²

Several international agreements either in effect or under consideration could ultimately affect the development and production of military equipment; they include the following: the Kyoto Protocol on Climate Change, the Montreal Convention on Substances Which Deplete the Ozone Layer, and a proposed European Union (EU) ban on the use and production of ozone depleting substances in the EU. Additionally, a plethora of domestic legislation abounds which ultimately could affect the fielding of military equipment. Most recently are a series of proposed regulations by the State of California which would place restrictions on emissions from diesel powered engines, carbureted two-stroke outboard motors, and sport utility vehicles (SUVs) which emit a larger percentage of pollutants than the average automobile.²³ Consequently, the

American defense industry must in many cases ensure compliance with international, EU, and domestic environmental regulatory legislation.

The Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) was the culmination in a series of international efforts to reduce the effects of global warming through reductions in the production of what are commonly called “greenhouse gases.” The global warming phenomenon which spawned establishment of the UNFCCC can be traced back to research conducted by the Intergovernmental Panel on Climate Change (IPCC) and other experts in the field. Their findings not only substantiated the global warming phenomenon but, more important, were able to link it to the anthropogenic emissions of carbon dioxide and five lesser gases, commonly grouped together as “greenhouse gases” (GHG). From a strictly compliance standpoint, the ultimate goal of the Kyoto Protocol is to reduce the amount of GHG emissions introduced into the atmosphere. GHG emissions can be reduced by either reducing the overall amount of usage by vehicles, planes, and ships, or by developing newer, more fuel-efficient systems. Ideally a new generation of transportation systems could be developed which do not produce GHG emissions at all. Reductions in the overall use of vehicles, planes, and ships will be discussed in subsequent portions of this paper.

Scientific advancement in the production of more efficient fuels and the development of alternate fuel sources are ongoing efforts with some promise. If allowed to move forward into production and distribution, the alternate fuel source of ethanol might not only revolutionize the entire energy industry, but also greatly reduce the production of GHG.²⁴ In some cases, more efficient and even some alternative fuels

might be produced that would enable use in existing engines. However, in most instances, the more efficient and alternative fuels would require development in concert with the ongoing design process for use in the next generation of weapon systems. The actions taken to overcome the potential affects of the Kyoto Protocol on equipping the force are very similar to the procedures required to mitigate the affects of other regulatory mechanisms such as the Montreal Convention and proposed legislation in the state of California.

Several Department of Defense (DoD) initiatives currently exist which were specifically designed to integrate environmental concerns into the development and production of new weapon systems. The Joint Group on Acquisition Pollution Prevention (JG-APP) was initiated to assist acquisition program managers adopt new materials and procedures to reduce the amount of hazardous materials at contractor production facilities. Additionally, DoD instituted a policy which requires "that every weapon system program conduct environmental, safety, and health (ESH) analyses."²⁵ The ESH analyses are initiated early in the acquisition process and are continually updated throughout the entire life cycle of the program.²⁶ If properly implemented, programs such as the JG-APP and the ESH analyses will greatly enhance the ability of the US armed forces and the defense industry to adequately equip the force while ensuring compliance with environmental regulatory measures. The greatest challenges to making these systems work will be the ability of DoD to comply with a rapidly changing array of existing laws while simultaneously anticipates the possible ramifications of future regulatory measures currently being considered for adoption.

TRAINING THE FORCE

Training is the single most important ingredient in the preparation of the armed forces for combat. It enables soldiers to become proficient in the employment of their weapons and leaders to become proficient in the employment of their units to perform the full spectrum of battlefield tasks. During the course of a unit's annual training cycle, specific guidelines stipulate the amount of firing to be conducted for each weapon system, the number of miles each vehicle should be driven, the number of flying hours for each aircraft, and a similar factor to account for the amount of training required for shipboard personnel. In each instance, the prescribed duration of an activity, combined with a measured level of proficiency or standard, will determine whether or not a unit is adequately trained to perform its wartime mission. For example, a reduction in the minimum number of flying hours for aircrew training would detract from a crew's overall proficiency and their ability to meet the prescribed certification standards for combat operations.

A lack of adequate training resources (e.g., ammunition, personnel, equipment, training ranges, fuel, spare parts, etc.) is yet another condition which might hinder a unit's quest to meet an acceptable level of proficiency for combat. For example, if a unit either was not allocated the proper type or amount of ammunition based on their assigned density of weapons, they might not be able to conduct the requisite training to prepare for combat. A lack of authorized personnel as a result of recruiting shortfalls could also seriously restrict a unit's ability to meet the proper standards of combat proficiency even if all remaining categories of resources were available in unlimited quantities.

One international initiative in particular, the Kyoto Protocol on Climate Change could have a significant impact on the ability of the US armed forces to properly train for combat. As mentioned earlier, the Kyoto Protocol seeks to reduce the amount of “greenhouse gases” (GHG), particularly carbon dioxide, emitted into the atmosphere. If implemented, the Kyoto Protocol would require the US alone to reduce greenhouse gas emissions 7% below 1990 levels during the period 2008-2012.²⁷ Although the Kyoto Protocol does not specifically limit GHG emissions from military aircraft, vehicles, and vessels, it does incorporate GHG emissions from military sources into the domestic GHG emission inventories of the developed countries listed in Annex 1 of the Protocol.²⁸ Emissions produced by military forces conducting multilateral operations in consonance with the UN Charter and fuel used by military aircraft and vessels operating in international territory are exempted from being counted against a nation’s domestic emission inventory.²⁹ Emissions from military sources produced in another country will be initially counted in the emissions inventory of the country in which they are produced, but can ultimately be accounted in one of three ways.³⁰ First, the country in which they were produced may count them: Germany would count emissions produced from a US Army tank training in Germany. Second, the country, which produced them, may count the emissions: the US would count emissions produced from a US Army tank in Germany. And third, they may be counted partially counted by both countries or shared among a number of countries: emissions produced by a US Army tank in Germany would be distributed among all the countries in the North Atlantic Treaty Organization (NATO).³¹ This last option is plausible because all US Army forces in Germany are part of the NATO command structure.

Consequently, in the event neither Germany nor NATO agreed to subsume the emissions produced by US military forces as outlined in the preceding scenario, the US would be obligated to subsume the emissions into the domestic GHG inventory for the US. This potential outcome, coupled by the fact that GHG emissions produced during training operations within US borders are also subsumed within the US domestic GHG inventory, might generate a consensus to regulate the emissions from the armed forces along with the emissions from all other domestic sources. The regulation of US military GHG emissions could have a tremendous impact on the combat readiness of each branch of military service.

An assessment of the impact of regulating US military emissions was performed by the US Department of Defense (DoD) prior to the meeting in Japan which drafted the Kyoto Protocol. The DoD Assessment posited the impact on military readiness given a 10% reduction in the fuel usage by military tactical and strategic systems.[†] This 10% reduction in fuel usage was estimated to roughly equal a 10% reduction in the GHG emissions by the armed forces. The following points highlight the potential shortcomings, which might occur in training readiness as a result of the 10% reduction.³²

According to DoD estimates, a 10% reduction in available fuel for training and operational requirements would correspond to 328, 000 fewer miles available to support tank training requirements.³³ If the planning figure to support tank training is a minimum of 800 miles per tank annually, either 410 tanks could not be driven for a year or each tank would be driven almost 100 miles less than the 800 mile standard.³⁴ Of even greater concern is the fact that DoD analysts further speculate that a reduction of this magnitude

[†] Although the Kyoto Protocol would require the US Government to reduce GHG emissions by only 7%, the DoD analysts used a 10% reduction in GHG for the purposes of their analysis.

might increase the additional training time required to deploy units to combat. With the exception of a very select number of units, the majority of US Army forces are normally allocated two weeks of intensive training to conduct final preparations for deployments to combat operations. A 10% reduction in fuel consumption would reduce unit training and overall readiness, and require as much as six weeks to conduct final preparations for combat operations.³⁵ In addition to the degradation in training readiness and the extension of deployment preparation time, the 10% reduction in fuel would significantly increase the time it would take US Army forces to rapidly deploy to the scene of a crisis.

The 10% reduction in fuel would have equally alarming affects on the training readiness and deployability of the US Navy and Air Force elements as well. The DoD assessment indicates that the Navy would cut 2000 steaming days per year from training and operations for deployed ships. The 112 steaming days allocated to non-deployed ships would be reduced along with the number of flying hours allocated to Naval aviation (Navy and Marines).³⁶ The US Air Force would absorb the 10% reduction in fuel consumption by reducing its annual flying program by over 210,000 flying hours. More specifically, the loss in flying hours would affect each of the Services in two critical areas; a reduction in the number of new pilots trained each year and a reduction in the sustainment training for assigned crews. With fewer flying hours allocated to basic entry or undergraduate pilot training, each Service would be able to train less pilots with a significant reduction in training standards. This reduction, much like the affect the Convention on the Rights of the Child had on the recruiting population, would further exacerbate the current pilot shortage precipitated by lower retention rates for pilots.³⁷ Additionally, the reduction in flying hours would limit allocated flying hours to each unit

and possibly require pilots to spend less time in the cockpit. Unfortunately most units are currently allocated the minimum essential flying hours to maintain pilot proficiency. By decreasing the number of available hours, the number of qualified crews at any one time would be reduced. Even by increasing the amount of time spent in aircraft simulators to off set actual flying hours, pilots would still be denied the minimum actual flying hours required to retain proficiency.

In addition to reductions in fuel consumption for military training and operations, the US armed forces might also be required to reduce the production of GHG associated with base operating functions such as electricity, heating, cooling, and the use of non-tactical vehicles. Of the GHG believed to be generated by military sources, approximately 42% are produced in conjunction with base operating functions; the remaining 58% for training and operations.³⁸ Consequently, in addition to seeking reductions in the emissions from training and operations, a potential effort might be made to reduce emissions associated with base operating functions. It is important to note that DoD has taken very deliberate measures to reduce the emissions of GHG associated with base operating functions. During the period between 1985 and 1995, DoD reduced its overall energy consumption by 20%. During this same period, the DoD reduced energy use for base operating functions by 13.9%.³⁹ The significant reductions in GHG by DoD not only exceeded the Administration's goal of a 10% reduction in GHG but also reinforced the commitment of DoD to comply with federal environmental guidance in areas that preserve the environment, yet minimize any adverse affects on military training and readiness. Consequently, as the Administration attempts to draft domestic legislation to implement the Kyoto Protocol, it must preserve the ability of the US armed forces to

adequately prepare forces for combat. Reductions in GHG for base operating functions should continue in consonance with guidelines and timetables established for all government agencies and organizations. However, the tremendous accomplishments of DoD should be recognized and where feasible constructive credit awarded for past accomplishments.

SUSTAINMENT OF FORWARD DEPLOYED FORCES

Execution of our current National Security Strategy requires the US to shape the international security environment via overseas presence and peacetime engagement activities. Overseas presence of US military forces is a manifestation of our alliance commitments around the world and serves as a visible deterrent to those whom might seek to question American resolve and willingness to respond against threats. In some cases the forward deployed forces are engaged in ongoing military operations such as the Stabilization Force (SFOR) in Bosnia, the Multinational Force Observers (MFO) in the Sinai, Deny Flight operations over Iraq, and the United Nations Command (UNC) forces preserving the peace in Korea. In other instances, military forces are forward deployed in Europe, Latin America, the Middle East, the Far East, and afloat on ships around the world. These forward deployed forces conduct training with allied nations and in many cases are poised to support regional contingency missions should the use of military force be required. Additionally, they serve as staging locations in the event more robust, "power projection" forces must be deployed from the continental US.

As US military forces conduct training and operations at overseas locations they must contend with a host of international agreements which regulate many operational

and logistics functions, to include the following: selected bilateral Status of Forces Agreements (SOFAs) which dictate specific hours which tanks may conduct live fire exercises at regional training areas, the Basel Convention on the Transboundary Movement of Hazardous Wastes which details internationally agreed upon procedures for the shipment of hazardous waste to environmentally approved disposal sites, a recently proposed European Union (EU) ban on ozone depleting substances such as CFCs used to cool the thermal night sights on many US weapon systems, and the recent adoption of the Ottawa Convention which bans the production, export, and emplacement of anti-personnel landmines which.⁴⁰ Although none of these agreements preclude US military forces from accomplishing their assigned missions, they will potentially affect the manner in which those missions are accomplished. Of particular interest is the Basel Convention that directly affects ongoing military activities around the world.

Forward deployed US military forces produce a tremendous amount of hazardous waste through the execution of daily operations. The Defense Reutilization and Marketing Service (DRMS), an arm of the Defense Logistics Agency (DLA), provides hazardous waste disposal services for US military installations and operations around the world. In FY96 and FY 97 alone, DRMS disposed of over 64 million tons of hazardous waste generated overseas.⁴¹ Hazardous waste comes in many forms and in a variety of states. Several examples of hazardous waste produced by US military forces include the following: residue from medical procedures; waste oils, lubricants, and solvents along with their corresponding filters and containers; batteries; and residue in the form of solutions or compounds which exhibit flammable, explosive, or corrosive properties. Disposal of hazardous waste is achieved via deposit into or onto land sites, release into a

water body, chemical treatment, incineration, or in some cases permanent storage. Disposal of hazardous wastes is also accomplished through programs which enable recycling, reclamation, direct re-use or possible alternative usage of the materials themselves or derivative components.⁴² In many cases adequate disposal facilities exist within the country where the hazardous waste was produced, while in other cases the hazardous material must be properly stored and eventually transported to a country that contains an appropriate disposal facility. Given the later circumstances, the hazardous waste can either be transported to the US or to another country with the capacity for proper disposal.

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal is an international agreement developed to regulate the import, export, and transit of hazardous waste that requires disposal. The Basel Convention was drafted in 1989 and entered into force in 1992. The US signed the convention in 1989 and the US Senate provided its advice and consent to ratification in 1992. However, prior to formal US ratification of the convention, domestic legislation must be in place to implement all of the Convention's provisions.⁴³ Currently, 121 nations plus the European Union (EU) are parties to the Convention.⁴⁴ US domestic legislation to permit implementation of the Basel convention is still pending.

The impact of Basel on the US and other non-Basel parties, and ultimately the US armed forces, is potentially significant. Article 4 of the Basel Convention prohibits parties from allowing hazardous waste to be exported to a non-party country or imported from a non-party country without a bilateral, multilateral, or regional agreement as outlined in Article 11 of the Convention.⁴⁵ Under certain circumstances previously

negotiated Status of Forces Agreements (SOFAs) may constitute the requisite Article 11 agreement needed to allow the import or export of hazardous waste from a non-party country. However, during emerging conflicts or contingency operations existing SOFAs or Article 11 agreements might not be in place. In recent years the movement of hazardous waste from Turkey, the Azores, Iceland, Japan, Malaysia, and Bosnia has been questioned, delayed, or otherwise frustrated because either the US or a third country in the transit process was a non-party country.⁴⁶

More specifically, in the case of US military forces initially deployed to Bosnia-Herzegovina (B-H) as the Implementation Force (IFOR), there was a period of approximately 8 months which elapsed before an appropriate Article 11 Agreement could be reached with all concerned parties (e.g., Germany, Austria, Hungary, Croatia, B-H, and the United States).⁴⁷ Consequently, the 20,000 US military forces deployed to B-H were required to properly store and maintain all hazardous waste until arrangements were completed to enable transboundary shipment of the hazardous waste to facilities in Germany for disposal. Limited amounts of hazardous waste were moved by US military vehicles under an international legal provision that allows transit by "sovereign immune vessels".⁴⁸ Under this application of international law, US military aircraft, naval vessels and vehicles are considered "immune" to the transit restrictions of Basel. However, the use of military vehicles to back haul hazardous waste diverts otherwise scarce military resources to missions which are normally handled by contracted civilian labor.

As the crisis in the Balkans proliferates, US military forces will likely increase their presence in the region which, in turn, will require further negotiation of Article 11 agreements to enable the transboundary movement of hazardous waste from Macedonia,

Albania and, ultimately, Kosovo to appropriate regional disposal facilities. Further, as US military forces continue to perform missions in support of worldwide contingency operations, military planners must include the peculiarities of the Basel Convention in the planning and coordination process. Finally, domestic US legislation is desperately needed to offset the constraints posed by the Basel Convention. By becoming a party to Basel the US will greatly enhance the ability of the armed forces to more efficiently sustain forward deployed forces while simultaneously ensuring compliance with international law.

THE WAY AHEAD

Over time, the Emerging Non-Traditional Security Issues (ENSI) of today will pass on into history. Some agreements will become ratified and enter into force, others will simply dissipate due to lack of interest or relevance, while others still will continue to linger. As the ENSI of today fade from the spotlight of public awareness, they will be replaced by a variety of even newer and more complex issues that will require conscious addressal. The real key to overcoming the possible debilitating effects of each emerging issue is the ability to identify the issues themselves and analyze the possible implications they might have on current and future military operations. To be successful, all of this must be accomplished well before the issue is transformed into the rough draft of an agreement at the negotiating table.

Of particular interest is the fact that the Department of the Army is currently conducting a study that eventually will develop a system to identify emerging issues in their embryonic stages and direct them to appropriate subject matter experts for detailed

analysis and recommendations.⁴⁹ This is not an easy task. Much work is also needed within the interagency arena to ensure that all components of the government are exchanging information and working toward the preservation of US national interests. In many cases, the emerging issues, which affect military operations, will have a similar if not more devastating affect on other aspects of society both at home and abroad. In other instances, the affects of existing and emerging issues will have a potentially equal or greater affect on other nations and their armed forces as well.

The nature of complex interdependence and soft power, coupled with the ever increasing influence of non-governmental organizations and special interest groups, is overshadowing the diplomatic process that has been in place for centuries. Further, as the global security environment continues to evolve there will be no projected shortage of scenarios that require the use of US military forces. A recently concluded crisis management exercise at the US Army War College, set in the year 2009, postulated no less than two dozen possible scenarios requiring the employment of US military forces.⁵⁰ Although the prospects for a major global conflict are relatively unknown, the potential for using military forces within the overarching framework of complex interdependence remains a possibility. The potential use of force, coupled with the reduction in US military forces over the past decade, makes it even more important that every effort is made to reduce the potentially debilitating effects that even the most obscure emerging non-traditional security issues might have on the US armed forces.

ENDNOTES

¹ Zbigniew Brzezinski, *The Grand Chessboard: American Primacy and Its Geostrategic Imperatives*, (New York: Basic Books, 1998), pp. 197-198.

² William Jefferson Clinton, *A National Security Strategy for a New Century*, (Washington, DC: US Government Printing Office, 1998), pp. 8-14.

³ Hans J. Morganthau, *Politics Among Nations: The Struggle for Power and Peace*, (New York: Alfred E. Knopf, Fifth Edition, 1973), pp. 40-44.

⁴ Robert O. Keohane and Joseph S. Nye, Jr., *Power and Interdependence*, (Boston: Little, Brown, Second Edition, 1989), pp. 23-29.

⁵ Joseph S. Nye Jr., *Bound to Lead: The Changing Nature of American Power* (New York: Basic Books, 1990), pp. 188-195 and pp. 198-201.

⁶ General Douglas A. MacArthur, Address to the United States Corps of Cadets, West Point, NY, 1962.

⁷ Keohane, pp. 24-25.

⁸ Major General Robert J. St. Onge, Jr., "Emerging Non-Traditional Security Issues (ENSI) Team Quarterly Report." Headquarters, Department of the Army Memorandum, 21 October 1998. Copy on file with the author.

⁹ Clinton, pp. 26-27.

¹⁰ Carl von Clausewitz, *On War*, edited and translated by Michael Howard and Peter Paret with Introductory Essays by Peter Paret, Michael Howard, and Bernard Brodie and a Commentary by Bernard Brodie (Princeton: Princeton University Press, 1976), p. 95; as quoted in Colonel Harry G. Summers, Jr., *On Strategy: A Critical Analysis of the Vietnam War* (Novato: Presidio Press, 1982), p. 220.

¹¹ Charles Moskos, "Short-Term Soldiers", *Washington Post*, 8 March 1999, p. 19.

¹² Kenneth Roth, "Sidelined on Human Rights", *Foreign Affairs*, March/April 1998, pp. 2-6.

¹³ Ibid, p. 3.

¹⁴ Lieutenant Colonel Thomas M. Garrett, "Convention on the Rights of a Child", Headquarters, Department of the Army Information Paper, 15 October 1998. Copy on file with the author.

¹⁵ Ibid, p. 1.

¹⁶ Ibid, p. 3.

¹⁷ "U.S. Army Recruiting Data, Age 17 Accessions, 1990-1998." Office of the Deputy Chief of Staff for Personnel, Headquarters, Department of the Army, April 1999. Copy on file with the author.

¹⁸ "U.S. Army Recruiting Data for Fiscal Year 1998 and 1999." Office of the Deputy Chief of Staff for Personnel, Headquarters, Department of the Army, April 1999. Copy on file with the author.

¹⁹ Lloyd Axworthy and Sarah Taylor, "A Ban for All Seasons: The Landmines Convention and Its Implications for Canadian Diplomacy", *International Journal*, Spring 1998, pp. 189-203.

²⁰ Garrett, pp. 3-4.

-
- ²¹ William S. Cohen, *Report of the Secretary of Defense to the President and Congress, 1998* (Washington, DC: U.S. Government Printing Office, 1998), p. 167.
- ²² Ibid, pp. 170-171.
- ²³ "Environmentalists Target California Watercraft", *Chicago Tribune*, distributed by Knight-Ridder/Tribune Business News, 9 November 1998.
- ²⁴ Richard G. Lugar and R. James Woolsey, "The New Petroleum", *Foreign Affairs*, January/February 1999, pp. 88-102.
- ²⁵ Cohen, pp. 170-171.
- ²⁶ Ibid, pp. 170-171.
- ²⁷ *The Kyoto Protocol: A Gap Analysis*, the Business Roundtable, June 1999, pp. 1-4.
- ²⁸ "Kyoto Protocol to the United Nations Framework Convention on Climate Change", Report of the Conference of the Parties on It's Third Session (CP.3) Held at Kyoto from 1 to 11 December 1997 Kyoto Protocol, United Nations Framework Convention on Climate Change, 13 March 1998, Annex I.
- ²⁹ Ibid, Decision 2/CP.3, p. 31.
- ³⁰ Ibid, Decision 2/CP.3, p. 31; and "U.S. Interpretation of the Provisions of the Kyoto Protocol That Address Military Operations and Training," Draft Department of Defense Memorandum, 19 May 1998, p. 3. Copy on file with the author.
- ³¹ Ibid, Decision 2/CP.3, p. 31; and "U.S. Interpretation of the Provisions of the Kyoto Protocol That Address Military Operations and Training," Draft Department of Defense Memorandum, 19 May 1998, p. 3. Copy on file with the author.
- ³² "Draft Department of Defense Background Paper on a National Security Provision for the Proposed Climate Change Protocol", in *Defense Environment Alert*, Vol. 5, No. 20, 23 September 1997, pp. 4-6.
- ³³ Ibid, pp. 5-6.
- ³⁴ Sean D. Naylor, "Are Heavy Divisions Going the Extra Mile for the Training?", *Army Times*, 8 February 1999.
- ³⁵ *Defense Environment Alert*, pp. 5-6.
- ³⁶ Ibid, pp. 5-6.
- ³⁷ Deb Price, "Military Misfires on Recruiting Void", *Detroit News*, 1 March 1999.
- ³⁸ *Defense Environment Alert*, p. 4.
- ³⁹ Ibid, p. 4.
- ⁴⁰ Major Peter F. Najera, "Emerging Non-Traditional Security Issues (ENSI)", Headquarters, Department of the Army Executive Summary (EXSUM), 13 August 1998. Copy on file with the author.
- ⁴¹ "Impact of the Basel Convention on Department of Defense Hazardous Waste Disposal", Office of the General Counsel, Defense Logistics Agency Fact Sheet, 3 February 1998. Copy on file with the author.
- ⁴² Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, <http://www.unep.ch/basel/sbc.htm>, 5 May 1992, Annex I-IV.
- ⁴³ "Basel Convention on Transboundary Movement of Hazardous Wastes", Bureau of Oceans and International Environmental and Scientific Affairs, U.S. Department of State Fact Sheet, 15 September 1998. Copy on file with the author.
- ⁴⁴ Kathleen Bartholomew, "Basel Convention", Headquarters, Department of the Army Information Paper, 13 October 1998. Copy on file with the author.

⁴⁵ Basel Convention, Article 4 and Article 11.

⁴⁶ Bartholomew, p. 2.

⁴⁷ Bartholomew, p. 2.

⁴⁸ Michael P. Mahoney, "The Impact of the Basel Convention on the Movement of DoD Generated Hazardous Waste", unpublished Defense Logistics Agency (DLA) Pacific Paper, 14 June 1996. Copy on file with the author.

⁴⁹ Major Peter F. Najera, "Emerging Non-Traditional Security Issues (ENSI) Study", Headquarters, Department of the Army, Executive Summary (EXSUM), 7 December 1998. Copy on file with the author.

⁵⁰ Student Crisis Exercise Handbook, U.S. Army War College, Carlisle Barracks, PA, 1999. Copy on file with the author.

BIBLIOGRAPHY

- Axworthy, Lloyd and Taylor, Sarah. "A Ban for All Seasons: The Landmines Convention and Its Implications for Canadian Diplomacy." *International Journal*, Spring 1998, pp. 189-203.
- Bartholomew, Kathleen. "Basel Convention." Headquarters, Department of the Army Information Paper, 13 October 1998.
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. <http://www.unep.ch/basel/sbc.htm>, 5 May 1992.
- Brzezinski, Zbigniew. *The Grand Chessboard: American Primacy and Its Geostrategic Imperatives*. New York: Basic Books, 1998.
- Business Roundtable. *The Kyoto Protocol: A Gap Analysis*. June 1999.
- Chicago Tribune*. "Environmentalists Target California Watercraft." Distributed by Knight-Ridder/Tribune Business News, 9 November 1998.
- Clinton, William Jefferson. *A National Security Strategy for a New Century*. Washington, DC: U.S. Government Printing Office, 1998.
- Cohen, William S. *Report of the Secretary of Defense to the President and Congress, 1998*. Washington, DC: U.S. Government Printing Office, 1998.
- Defense Environment Alert*. "Draft Department of Defense Background Paper on a National Security Provision for the Proposed Climate Change Protocol." Vol. 5, No. 20, 23 September 1997.
- Garrett, Lieutenant Colonel Thomas M. "Convention on the Rights of a Child", Headquarters, Department of the Army Information Paper, 15 October 1998.
- Keohane, Robert O. and Nye, Joseph S. Jr. *Power and Interdependence*. Boston: Little, Bown, Second Edition, 1989.
- Lugar, Richard G. and Woolsey, R. James. "The New Petroleum." *Foreign Affairs*, January/February 1999.
- MacArthur, General Douglas A. Address to the United States Corps of Cadets. West Point, NY, 1962.

- Mahoney, Michael P. "The Impact of the Basel Convention on the Movement of DoD Generated Hazardous Waste." Unpublished Defense Logistics Agency (DLA) Pacific Paper, 14 June 1996.
- Morgenthau, Hans J. *Politics Among Nations: The Struggle for Power and Peace*. New York: Alfred E. Knopf, Fifth Edition, 1973.
- Moskos, Charles. "Short-Term Soldiers." *Washington Post*, 8 March 1999.
- Najera, Major Peter F. "Emerging Non-Traditional Security Issues (ENSI)." Headquarters, Department of the Army Executive Summary (EXSUM), 13 August 1998.
- Najera, Major Peter F. "Emerging Non-Traditional Security Issues (ENSI) Study." Headquarters, Department of the Army, Executive Summary (EXSUM), 7 December 1998.
- Naylor, Sean D. "Are Heavy Divisions Going the Extra Mile for the Training?" *Army Times*, 8 February 1999.
- Nye, Joseph S. Jr. *Bound to Lead: The Changing Nature of American Power*. New York: Basic Books, 1990.
- Price, Deb. "Military Misfires on Recruiting Void." *Detroit News*, 1 March 1999.
- Roth, Kenneth. "Sidelined on Human Rights." *Foreign Affairs*, March/April 1998.
- St. Onge, Major General Robert J. Jr. "Emerging Non-Traditional Security Issues (ENSI) Team Quarterly Report." Headquarters, Department of the Army Memorandum, 21 October 1998.
- Summers, Colonel Harry G. Jr. *On Strategy: A Critical Analysis of the Vietnam War*. Novato: Presidio Press, 1982.
- United Nations Framework Convention on Climate Change, Kyoto Protocol to the United Nations Framework Convention on Climate Change. Report of the Conference of the Parties on It's Third Session (CP.3) Held at Kyoto from 1 to 11 December 1997, 13 March 1998.
- U.S. Army War College. Student Crisis Exercise Handbook. Carlisle Barracks, PA, 1999.

U.S. Department of the Army. "U.S. Army Recruiting Data: Age 17 Accessions, 1990-1998." Office of the Deputy Chief of Staff for Personnel, Headquarters, Department of the Army, April 1999.

U.S. Department of the Army. "U.S. Army Recruiting Data for Fiscal Year 1998 and 1999." Office of the Deputy Chief of Staff for Personnel, Headquarters, Department of the Army, April 1999.

U.S. Department of Defense. "U.S. Interpretation of the Provisions of the Kyoto Protocol That Address Military Operations and Training." Draft Department of Defense Memorandum, 19 May 1998.

U.S. Department of Defense. "Impact of the Basel Convention on Department of Defense Hazardous Waste Disposal." Office of the General Counsel, Defense Logistics Agency Fact Sheet, 3 February 1998.

U.S. Department of State, Bureau of Oceans and International Environmental and Scientific Affairs. "Basel Convention on Transboundary Movement of Hazardous Wastes." U.S. Department of State Fact Sheet, 15 September 1998.

von Clausewitz, Carl. *On War* (edited and translated by Michael Howard and Peter Paret with Introductory Essays by Peter Paret, Michael Howard, and Bernard Brodie and a Commentary by Bernard Brodie). Princeton: Princeton University Press, 1976.